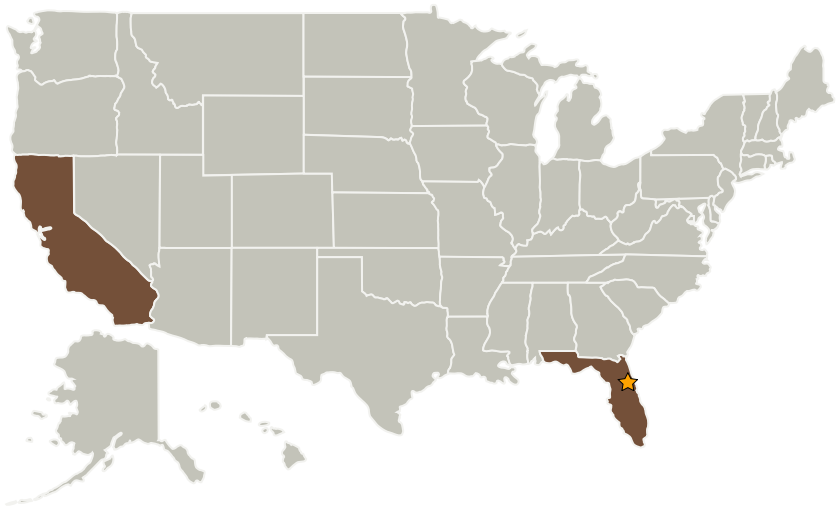
Multi-Sensor Aerial Intrusion Detector, Phase I

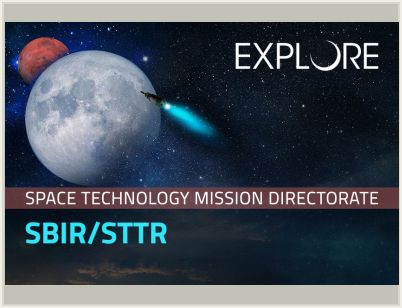
Completed Technology Project (2006 - 2006)

Project Introduction

NASA is seeking means to increase surveillance efficiency during mission launch operations. Launch delays are expensive, so any incremental increase in efficiency of launch range surveillance should produce large cost savings. To meet this requirement, Broadata Communications, Inc. (BCI) proposes to develop a new combined hardware and software sensor package for early intrusion detection called Multi-Sensor Aerial Intrusion Identifier that will be suitable for mounting in small UAVs of 10 feet wing span or less. The proposed intrusion detection system will be based on combining the output from three separate sensor systems: IR, Doppler Motion, and Stereo Video, to increase the reliability and sensor detection range compared to using any of these sensor systems on its own. The combined systems will have a 3-5 nautical mile forward detection range, compared to 1 nautical mile detection range for each individual sensor. It will produce a reduction of at least a factor of 3 in the number of small UAVs needed for launch range surveillance, and consequently, a dramatic reduction in the cost of surveillance. The UAVs will be equipped with warning sirens and warning lights to issue warnings to intruders, further automating launch range safety operations.

Primary U.S. Work Locations and Key Partners





Multi-Sensor Aerial Intrusion Detector, Phase I

Table of Contents

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Kennedy Space Center (KSC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Multi-Sensor Aerial Intrusion Detector, Phase I

Completed Technology Project (2006 - 2006)

Organizations Performing Work	Role	Type	Location
★Kennedy Space Center(KSC)	Lead Organization	NASA Center	Kennedy Space Center, Florida
Broadata Communications, Inc.	Supporting Organization	Industry	Torrance, California

Primary U.S. Work Locations	
California	Florida

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX16 Air Traffic Management and Range Tracking Systems
  - TX16.5 Range Tracking, Surveillance, and Flight Safety Technologies